

ABSTRACT OF THE DISCLOSURE

A system and a method for an ambient atmosphere ion thruster having a pair of permeable electrical members for accelerating ambient atmosphere ions which enter the thruster due to a craft's relative velocity. Neutral ambient atmosphere molecules in the intake mass flux may also
5 be ionized and subsequently accelerated by the pair of permeable electrical members. Acceleration of any entering mass comprises an exhaust mass flux which then produces a net thrust. Such net thrust is then vectored by configuring and orienting the thrusters for imparting axial and lateral accelerations as well as pitch, yaw, and roll controls. The present invention is operational in proximity to any celestial body having a sensible atmosphere during a portion of
10 the free trajectory or during orbiting at altitude. Useful net thrust is thereby produced without need for carrying reaction mass onboard a spacecraft.